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Eminent Veterinary Clinicians of the Past

Addresses on the occasion of the Central Veterinary Society's R.C.V.S. Centenary Commemoration Meeting

(*Continued from page 115*)

II.—By COLONEL SIR ARTHUR OLVER

In paying tribute to eminent clinicians who have been associated with the Army in the past, I find that in the limited time at my disposal, I can deal only with a very few of the more outstanding personalities. Moreover, I have had to adopt a broad interpretation of the word clinical, since so many Army officers in their later service were to a large extent divorced from the actual treatment of cases.

EDWARD COLEMAN (1765-1839)

In 1794, Edward Coleman, Principal of the London College, was appointed to take charge, in a supervisory capacity, of the animals of the Ordnance at Woolwich. This association, by means of weekly visits from London, continued until he died in 1839, and whatever view be taken of his influence on veterinary education and the status of veterinarians as a whole there is no doubt that during that period an immense advance was made in the general health and care of army animals and that Coleman was largely responsible for securing the employment of veterinarians, instead of farriers, for such work.

Lacking in veterinary training, Coleman obviously had much to learn of animal diseases when he first became associated with the Army, but he was a very observant and able man, and with experience appears to have acquired considerable knowledge, and to have been very successful in imparting it to his students, during the short course of study which he considered sufficient for veterinarians.

During his 45 years' association with the Army, Coleman also secured great and permanent reforms in the hygiene of stables: ventilation, drainage and feeding, and succeeded in bringing glanders and other contagious diseases under better control. Thus he deserves honourable mention as a clinician though he published little of value on veterinary matters, and to the end held that the diseases of the horse were few in number and so simple as to require only simple treatment.

His publications dealt mainly with the structure of the horse's foot and with shoeing but his book of instructions, for the use of farriers, met with much adverse criticism from some of the more enlightened farriers of the time and his views on shoeing soon became discredited.

From his earliest days as a medical man Coleman was constantly experimenting, largely on physiological matters, but his experiments were not published and nothing of permanent value seems to have arisen from them.

He is described as a man of much ability, charm, and wit, who in his earlier days was energetic and exercised a great deal of tact in securing his aims.

JOHN PERCIVALL

Much of the credit for the great improvement which was effected under Coleman's supervision must go to John Percivall, who was essentially a clinician, deeply interested in everything connected with his profession, and there is little doubt that his marked proficiency had a decisive effect in securing the general adoption of the principle of employing veterinarians instead of farriers to take charge of army animals.

Of a retiring nature, John Percivall did not contribute much to veterinary literature, except in association with his son, William. Throughout his 60 years at Woolwich he, however, devoted himself wholeheartedly and constantly to clinical and other studies and took the greatest pains to arrive at correct diagnoses based on the latest advances of science. He was meticulously thorough in carrying out and recording *post-mortem* examinations, which he made at every opportunity, and it seems certain that Coleman and William Percivall both derived much benefit from his careful clinical notes and long experience. John Percivall was also known to have been an expert anatomist and to have carried out numerous experiments on the action of medicines on animals and it seems clear that he was associated with his son in the preparation of at least the first of the three volumes, containing in all 78 lectures, which were published under the title "A Series of Elementary Lectures on the Veterinary Art, wherein Anatomy, Physiology, and Pathology of the Horse are essayed on the General Principles of Medical Science."

Sir Frederick Smith states in his history of veterinary literature, that these lectures contain a remarkable amount of physiological knowledge and a first-class account of 19th century veterinary practice. John Percivall is known to have been very highly esteemed by the Army authorities and deserves a high position as a veterinary clinician and the father of scientific veterinary practice in the Army.

WILLIAM PERCIVALL (1792-1854)

William Percivall was the only child of John Percivall and obtained his Veterinary Diploma in 1811 at the early age of 19.

He served in the Peninsular War and afterwards worked with his father at Woolwich. He then took part in the Waterloo campaign, but being again placed on half pay, took up the study of human medicine at St. Thomas's Hospital. After qualifying in medicine he again worked with his father at Woolwich, devoting himself to study—anatomical, physiological and clinical.

From that time forward Wm. Percivall contributed a great deal to veterinary literature. His first work, written while on half pay, in association with his father, was the series of 78 elementary lectures already mentioned.

In 1827 he was appointed to the First Life Guards and served with that regiment until his death in 1854. In 1828 he started the publication of *The Veterinarian*, the functions of which were to be: "the collection of clinical material for reference; the diffusion of professional knowledge; to arouse the profession to a sense of its position, and to shake off the medical incubus which threatened to strangle it; and to wake up the London school and extend its usefulness to all animals besides the horse." In this he was soon joined by Youatt, but on the death of the latter Percivall carried on the journal alone for over 30 years.

In 1832 he published his "Anatomy of the Horse," and from 1834-53 his classical work, "Hippopathology," both of which were first brought out in *The Veterinarian* and afterwards published in book form.

In 1850 he published a series of lectures on the form and action of the horse.

Not much personal information is available regarding William Percivall, but Colonel Apperly (Nimrod) in July, 1834, wrote of him as "the man of science, the practitioner, the scholar and the gentleman"—a happy description which seems to give a good idea of this outstanding man. He is said to have been extremely kind and of a deeply religious character and Smith, than whom no one was more competent to judge, states that he was the greatest man the Army Veterinary Service had produced. His "Hippopathology" alone is sufficient to qualify him for lasting fame and may still be read, with profit and pleasure, as a model of clear expression, and sound clinical reasoning from a fully informed background.

WILLIAM MOORCROFT (1767-1825)

Born in 1767, Moorcroft served seven years' apprenticeship in the medical profession but, having at the end of that period shown marked ability in an official enquiry into cattle plague, he was induced to take up veterinary work instead and going to the Lyons School, qualified there as a veterinarian in 1790 after one year's study.

After practising as a veterinary surgeon in London for 16 years, he went to India in 1808 to take up the post of superintendent of the Bengal Horse Breeding Stud at Pusa, and made a great name for himself, as a man of wide practical knowledge in agricultural as well as veterinary matters, and as a man of science and an explorer of note.

Before going to India, he was offered the Principalship of St. Pancras School and 1794 saw him appointed Joint-Principal with Coleman, but this arrangement proved unworkable and after a few weeks Moorcroft relinquished the post to Coleman. From this and other evidence it is clear that Moorcroft was highly esteemed as a practitioner, and though his contribution to veterinary literature was not large, there is ample evidence from what remains to us of his correspondence and notes that he was outstanding as an acute observer and for his sound knowledge of the care and management of animals, and in a great variety of other matters.

He was paid a very high salary on going to India, and it is evident that the high value placed upon his services was soon justified, as

under his control the losses from disease and unsoundness, which previously had been extremely high, were reduced by 90 per cent. Much of this reduction was undoubtedly due to better management, but Moorcroft also revolutionised the methods of veterinary treatment, and it was due largely to his success that the employment of qualified veterinarians was adopted by the Indian Army and the Civil Administration of India.

Being dissatisfied with the class of remounts bred at Pusa, he established subsidiary breeding studs in more favourable localities and undertook two extensive journeys into Central Asia to endeavour to secure better breeding stock. From the second of these he never returned and for a number of years his fate was unknown. Eventually it was learned that he had been murdered at Balkh in N.W. Afghanistan, where he had gone, after securing the horses and mares he sought in Bokhara, having been told that the finest horses in the world were bred there. He knew the risk he ran but had he been able to secure a regular supply of the strong type of Turkman horse, which can still be seen at Balkh, it seems probable that he would have produced a remount much better able to carry weight than those commonly produced in India at that time.

Moorcroft was the first Englishman to cross the Himalayas and travelled extensively in Nepal, Afghanistan, and Central Asia. His journals contained a great deal of information in veterinary and other matters and a portion of them was afterwards published as a book of travel.

While in India Moorcroft did much by written instruction and otherwise to improve the standards of veterinary treatment and care of army animals, but he himself deplored that during his 16 years in London he was too busy to record his observations. There is, however, ample evidence from his work and correspondence that he was far ahead of his times. He was the first to introduce machine-made shoes; he practised the operation of Plantar neurectomy for navicular disease and did much to improve the management of horses and control disease in India; he had a clear understanding of the difference between strangles and glanders, and knew that farcy and glanders were due to the same poison; his observations on bursati have since been shown to be substantially correct, and our knowledge of kumri has not been much advanced from the excellent clinical description he then gave of this baffling condition; he was the first to warn the Government of India against another highly fatal disease which from his description has since been identified as anthrax. In short, Moorcroft was a very outstanding personality well educated and highly trained with an insatiable thirst for knowledge and possessed of great drive, courage, and determination in carrying out the high endeavour which he set himself. No portrait of him appears to exist but he has been described as a slight, quick-tempered man of high intelligence, and far ahead of his time.

The Hallens

The next to be mentioned are J. H. B. Hallen and his father, H. Hallen, who for many years was veterinary surgeon to the Inniskilling Dragoons. The father seldom appeared in print but he was recognised as one of the best men in our profession and is said to have given much assistance to Sir Frederick Fitzwygram in the production of his "Notes on Horse-shoeing" and "Horses and Stables," and to have been largely responsible for the Fitzwygram shoe. The son, J. H. B. Hallen, after qualifying in human medicine, passed out of Professor Dick's School in 1848 and entered the service of the East India Company in 1850. He served with the Army until 1862 and at twelve years' service was made Inspecting Veterinary Officer of the Bombay Army. In this capacity he organised the veterinary service of the force and established the veterinary school at Poona. For a short period, in 1866-67 he was Principal of the Royal (Dick) Veterinary College but he was then recalled to India and during 1867-68 was head of the Army Veterinary Service during the Abyssinian War. In 1869, his services were asked for by the Government of India in connection with cattle plague and he became President of the commission which sat until 1872 and furnished the official publication on that disease.

From 1872-76 he was one of the commissioners charged with breaking up the old Indian remount breeding studs and it was due to his initiative that the Indian Civil Veterinary Department, with its schools and extensive system of veterinary hospitals and infirmaries, was brought into being. He also organised the Horse Breeding Studs and in 1892 became Inspector-General of the Civil Veterinary Department of India. Smith states that he was a very able man who would have shone in any calling and there is ample evidence from his work that he had a very thorough and up-to-date knowledge of his profession and did a great deal to demonstrate in India the value of veterinary science for the systematic study and control of the diseases of stock. Being, for the most part, actively engaged in administration duties his contributions to veterinary literature were not large.

George Fleming

After qualifying at the Edinburgh College, under Professor Dic Fleming entered the Army and proceeded to the Crimea. Late he served in China and travelled through Manchu territory on whi he wrote a book of travel. He left China in 1862, and after servi with the Third Hussars and Royal Engineers, was employed for short time in purchasing animals for the Abyssinian War. In 187 he was posted to the Second Life Guards, and two years later appoin ed Principal Veterinary Surgeon in succession to James Collin Fleming is said to have been modern in every sense with advanc views. He was at pains to make the Aldershot Veterinary School seat of scientific research, and his services to the profession as a whi are of outstanding merit. Among other things, he financed fro his own pocket the Veterinary Surgeons Act of 1881.

His contributions to veterinary literature were also very conside able. In 1875 he started *The Veterinary Journal* and continue editing it for 20 years with conspicuous zeal and ability, and h books on "Veterinary Obstetrics," on "Horses and Horse-shoeing and his "Manual of Veterinary Sanitary Science" are standar works well known to the profession. He was a great worker who pen was never idle. He is described as a lively, entertaining com panion and an attractive personality.

Colonel H. T. Pease

Born in 1862, Pease graduated from the London College in 18 and entered the Army Veterinary Department in 1884. In 18 he went to India and after three years' service in the Army w appointed Assistant Superintendent of the Horse Breeding Depar ment of the Punjab Government. In 1900 he was appointed Supe intendent of the Imperial Bacteriological Survey and professor the Veterinary College at Poona. In 1892, he became Inspect General in charge of the Punjab Veterinary Department and eventual succeeded Colonel Nunn as Principal of the Punjab Veterina College.

Pease devoted most of his service to civil veterinary work in Ind and is said to have done more to help veterinary science in th country than any other. He was an indefatigable worker in the fi of tropical science, an expert linguist, and a prolific writer. He h a good knowledge of Urdu and lectured in that language. He al published a monthly veterinary journal in Urdu for 13 years. B these means he raised the standard of instruction at the Laho College to a high level; in scientific matters as well as in clinic veterinary practice for which this College had exceptional facilitie As superintendent of the Imperial Bacteriological Survey, h travelled widely and acquired considerable knowledge of disease co ditions in India and Burma, and was mainly instrumental in esta lishing the Imperial Bacteriological Institute at Muktesar, the s for which he selected. He also wrote numerous books on contagio diseases in Urdu and as Inspector-General of the Punjab Veterina Service did much to improve cattle breeding and disease control that province. He contributed the veterinary series of the ag cultural ledger, published by the Government of India; had mu to do with the development of the Great Hissar Farm as a stud fa for the improvement of cattle and other stock, and wrote a numb of brochures giving the breed characteristics of a number of Ind breeds of cattle.

He was one of the first, if not the first, to demonstrate the existe of dourine in India and did a great deal of valuable work on sur particularly in camels. He was much interested in research and, collaboration with Captain Baldrey and Mr. Montgomery, of t Indian Civil Veterinary Department, brought out the *Journal Tropical Veterinary Science*. Throughout his career, Pease wa most active and energetic personality, very interested in educati and research but also very much at home in dealing with the breed and care of cattle and horses and livestock of all kinds.

Major-General Sir Frederick Smith

I now come to the greatest of all, Major-General Sir Fred Smith under whom I had the honour to serve for years in South Afr and in this country. General Smith's work is so well known to y that it seems unnecessary for me to go into much detail. Moreov in the fourth volume of his "History of Veterinary Literature," w have an admirable description of his life from the pen of Dr. Bullo which ought to be read by every young veterinarian. We are fo tunate also in having an excellent portrait of General Smith in t Council Room of the Royal College of Veterinary Surgeons and spa does not permit of my dealing adequately with the immense litera labours of this great veterinarian. I need only mention that the course of 50 years he published over 150 articles and books which the best known are his Manuals of Veterinary Hygiene, Saddl and Sore Backs, Veterinary Physiology, the History of Veterina Literature (four volumes), and the History of the Royal Army Veteri ary Corps. I must, however, mention a few of the outstanding featu

of the extremely strenuous life he devoted to the service of his profession.

As a student living near Woolwich, he daily left his home at 5 a.m., after cooking his own breakfast, walked to the station and, after an hour's train journey, walked another three miles to the College. On foggy days he had to leave even earlier, yet he never missed a lecture. This was typical of the man. Throughout his life he never relaxed the severe daily routine of work, planned relaxation, regulated exercise and some general reading which he set himself early in his career.

Sent to India in 1877, Smith overstrained his eyes studying bursati and was invalided home, but he returned in 1879 having, in the meantime, investigated the cause of sore backs. In 1882, with Pease and Steel, he started the *Quarterly Journal of Veterinary Science*, of which seven volumes appeared and in which a great deal of valuable clinical and other material was published. On his return to this country in 1885, Smith carried out experiments on the ventilation of stables and in 1886 was appointed Assistant Professor at the Army Veterinary School, Aldershot, where, among other activities, he established the vaccine institute, which until 1907 supplied the Army with its smallpox vaccine. He also carried out a series of experiments on the effects of small-bore rifles on animal carcases.

Rising at 5 a.m. and taking only two meals a day, he became completely absorbed in research while at Aldershot and published no fewer than 49 articles, brochures, and pamphlets, as well as his manuals on Veterinary Hygiene, Saddles and Sore Backs, and Veterinary Physiology. After leaving Aldershot he studied the structure of the horse's eye, on which he wrote the first of several papers which he read before the Royal Society. In 1894 he wrote a paper on "Losses of Horses in War," and in 1897 studied pneumonia, sounding a large number of lungs, and charting them for comparison in due course with the *post-mortem* findings. He was the first British veterinarian to undertake the serious study of animal physiology, and was the recipient of the Steel Memorial Medal in recognition of his labours for veterinary science.

Later he served in the Nile campaign in charge of a veterinary hospital and through the South African War, of which he wrote the official veterinary history.

After three years as Principal Veterinary Officer in South Africa he was appointed Director-General, Army Veterinary Service, in 1907.

His demand that the Army Veterinary Service should be made independent of the Remount Department in all matters not being acceded to, he resigned this appointment after three years and immediately commenced his History of Veterinary Literature, material for which he had long been collecting. From 1914-18 he was re-employed for home service during the Great War and after the cessation of hostilities was engaged in completing his History of Veterinary Literature and the History of the Royal Army Veterinary Corps. In spite of increasing ill-health he continued his literary work until a few days before his death in 1929. Smith's whole life was a wonderful example of complete devotion to scientific work and the advancement of his profession and the cumulative value of his endeavours has undoubtedly been very great.

As to his personality, I can add little to what has already been so admirably said by Dr. Bullock. Essentially he was a shy and kindly man who, owing to his extreme self-discipline, appeared much more severe than he really was, except to those who displayed little interest in their professional work. He was resentful of anything savouring of bureaucratic obstruction and, never sparing himself, expected much of those working under him, but he always endeavoured to be strictly just and was always willing to give encouragement and every assistance to workers who showed real interest in their work. Though he never took part in games, he liked his officers to take their part in social activities.

Sir John Moore

Another great worker under whom I served in France during the Great War was Major-General Sir John Moore.

Brought up on a farm and graduating from the New College, Edinburgh, in 1885, he worked in private practice for four and a half years.

Joining the Army in December, 1889, he saw service in India, Egypt, South Africa, America and France, and everywhere his sound knowledge of veterinary medicine and of the care and management of animals was highly thought of. This was particularly so in connection with his service on remount purchasing duties in the Argentine and North America, after which he was deputed to assist in the preparation of the official scheme for horse purchase in the event of war, which proved of great value in the Great War.

Throughout his service Moore was constantly at work and his great opportunity came when he was appointed Director of Veterinary Services in France in 1914. In that war, for the first time, the Army Veterinary Corps had an opportunity to demonstrate the great value of a complete veterinary service, under the supreme technical control of a veterinarian and organised and equipped to take full charge of sick and injured animals from the time they fell ill to their discharge from a convalescent depot. The great reduction in sickness and mortality which occurred in France and in all other theatres of operations clearly demonstrated the superiority of such control compared with any previous system in which the last word lay with a non-professional official.

During the whole time that I served under him, General Moore never ceased, from early morning till late at night, to work and organise for the benefit of the animals and the personnel committed to his charge. Due to this constant interest and encouragement to all ranks the corps met the heavy demands made upon it with great advantage to the animals and the public purse and it is of interest that at a late stage of the war the Army Veterinary Corps was reported upon by a senior combatant officer as the most highly efficient service in France.

After the war, proceeding to India as Director of Veterinary Services, Moore was largely instrumental in establishing the Indian Army Veterinary Corps as an integral part of the Indian Army, and after his retirement he continued to work constantly for the benefit of the horses and the profession in which his whole life was wrapped up.

He was concerned in the production of various instructions for the control of disease amongst animals, and throughout his service did much to foster sound clinical practice amongst his officers.

He was to the end greatly interested in the officers and men who had served under him and for ever thinking of ways and means of promoting the comfort and proper treatment of animals. He knew every officer and many of the men serving under him and did much, by perfecting the organisation of hospitals and other units and by the issue of carefully prepared instructions, to control disease and ensure proper treatment of the sick. Of a happy disposition, he was deservedly popular with all ranks and during his busy life did much to enhance the value and status of the profession.

Other names which deserve honourable mention as clinicians are those of Griffith Evans, who first demonstrated the organism of surra, and John Henry Steel, son of C. Steel, veterinary surgeon of the 12th Lancers. A brilliant student, Steel qualified in London in 1875 and entered the Army Veterinary Service but almost immediately left it to take up a teaching post at the London School. While at the College he published his "Equine Anatomy" in 1876 and his "Bovine Pathology" in 1881.

Rejoining the Army after a few years he went to India and investigated surra in Burma, describing it as relapsing fever of equines.

In collaboration with Pease and Smith he established the *Quarterly Journal of Veterinary Science* in India, which was carried on from 1882 to 1890 when Steel died; he became the Principal of the Bombay Veterinary College and among numerous other activities published a work on the diseases of the elephant in 1885 and another on the diseases of the dog in 1887. Invalided home, due to illness contracted while on cattle plague work, he published works on diseases of camels, 1890, and diseases of sheep, 1890, but died shortly afterwards in India, to which country he had returned against medical advice.

Brigadier-General F. Eassie, who devoted much thought to the "kraal" system of dealing with army remounts and to devising his special saddles for the prevention of sore backs, may also be mentioned, but space does not permit of more.

It may be noticed that the majority of the names selected are those of men who have filled high administrative appointments. This, in view of the conditions of the Service, is inevitable and it should be a source of great encouragement to young men entering the Army that such scientifically trained men, primarily interested in clinical matters, have proved highly efficient as organisers and administrators, both in the Army and in civil life.

(To be concluded with addresses delivered by the late Lieutenant-Colonel J. W. Brittlebank and by Dr. J. McCunn.)

ROYAL COLLEGE OF VETERINARY SURGEONS

Prize Awards

At the meeting of Council, R.C.V.S., held on January 11th, 1945, award of the following prizes was announced:—

Walley Prize

1940: Htwe, M. S. (Dublin).
1941: Thorne, A. L. C. (London).
1942: Kelly, W. R. (Dublin).
1943: Plowright, W. (London).
1944: Cronin, N. T. I. (Dublin).

Williams Prize

1944: Duncan, L. J. P. (Edinburgh).

As announced previously in our columns, Mr. Duncan was also the winner of last year's First Fitzwygram Prize.

CLINICAL COMMUNICATIONS

An Abdominal Injury in a Mare*

A. LEASON, M.R.C.V.S.
IPSWICH

Subject.—Suffolk mare, six years old.

History.—One Sunday afternoon in June the mare staked herself and had an abdominal wound.

Examination.—The wound was situated slightly to the near side of the mid-line and about midway between the sternum and pubis. From it protruded a portion of small intestine, about as large as a medium-sized apple, which was slightly discoloured. The mare showed no signs of pain. On palpation, it was found that the extruded portion of bowel could not be returned without grave danger of perforation. As there were hosts of flies settling on the extruded bowel an emergency dressing of cotton wool soaked in normal saline, together with a portion of an old sheet, was tied with a surcingle round the animal's abdomen.

On returning an hour later, with sidelines, chloroform, etc., it was found that no attention had been paid to the mare and that the emergency dressing had moved. The exposed portion of bowel was again exposed to the air and flies, and was now quite black in colour, due no doubt to exposure and partial strangulation.

Treatment.—The mare was cast, sidelines being used and not hobbles, in an attempt to minimise damage to the gut by the legs. Unfortunately, when the animal went down, the straining against the ropes and the increased pressure as she lay on her side forced 2 to 3 feet of small intestine on to the ground. As no skilled assistance was available, the wound was plugged with cotton wool, leaving the contaminated loop of bowel outside while the sidelines were fastened. The mare was then pulled on to her back, propped in that condition and chloroformed.

The extruded bowel was washed in warm normal saline and then in 1 in 10,000 euflavine solution, and an attempt was made to replace the large loop. This was found to be impossible through the existing wound, which was enlarged, using a blunt pointed bistoury, to allow the bowel to be returned. Having replaced the loop as far as the originally protruded part it was found necessary to enlarge the wound by a further incision up to four inches or more in length, as this part of the small intestine was so swollen and enlarged, and by now quite black with the peritoneal coat cracked and fissured due to the action of the heat and flies while exposed to a certain amount of strangulation.

Six to eight ounces of sulphanilamide was now insufflated through the wound and over the underlying tissues and loops of intestine. The wound was sutured with ordinary white string doubled and soaked in euflavine solution; deep sutures were inserted through the transverse muscle and peritoneum, and superficial ones through the rectus and oblique muscles. The skin was then sutured and the mare allowed to get up.

Prognosis.—Unfavourable. The owner was told that the mare would probably die.

Course.—The next day the mare was nearly normal, pulse good, temperature 101° F., bright, but was not feeding. Eggs and a gallon and a half of milk with ½ lb. salt was administered by the stomach tube, and a blister was applied to the tissue around the wound to promote swelling and to attempt to eliminate any immediate hernia should the sutures give way. The wound itself was dressed with sulphanilamide powder.

On the third day after the operation the mare's temperature began to rise and was above 103° F. The mare was constipated and an aloes ball was given. An initial dose of 8 oz. sulphanilamide was administered with milk by the stomach tube followed by 2 oz. twice daily.

On the sixth day the mare was dull, her temperature was 105° F., and pulse was fast and hard; the sulphanilamide was discontinued.

By the tenth day the temperature had fallen (103° F.), the mare was brighter and began to feed. The stomach tube administration of milk and salines was discontinued. The wound was discharging freely and two sutures came away. At this point there was no hernia and the edges of the wound were granulating. The mare was now allowed some liberty of movement, being taken out daily to the water trough in the yard, and the owner reported progress on alternate days.

A fortnight later the mare's temperature was normal, the wound was still discharging and two more sutures which were hanging out were removed. A slight hernia was suspected, a protuberance of the muscles being observed.

When seen six months later the mare was quite fit and well. A hernia the size of a large apple was apparent at the site of the original wound. The mare had done a certain amount of light work.

CONCLUSIONS.—Interesting features of this case are (1) the mare's recovery in spite of the state of the small intestine and the contamination which must have occurred before replacement and (2) the fact that no fatal hernia occurred.

* Presented to the annual general meeting of the Eastern Counties Division, N.V.M.A., at Norwich, February 23rd, 1944. Received for publication February 12th, 1945.

Paraplegia in the Horse

W. W. LANG, M.R.C.V.S.
BRIGG

Subject.—Five-years-old shire gelding.

Symptoms.—When seen a few days after the onset of the condition the patient showed no pain or loss of appetite but moved with such a rolling gait and degree of inco-ordination that it was surprising he did not fall. There was no history of accident and the cause of the symptoms was obscure.

The general condition of the patient was poor, slight unthriftiness and a harsh coat suggesting the possibility of strongylosis. The possibility of verminous thrombosis of the posterior aorta or a lesion in the spinal cord was considered.

Treatment.—Two pints of 5 per cent. solution of common salt and sodium citrate were given intravenously. In a week's time there was marked improvement both in general condition and gait and in another week progress was found to be well maintained. The treatment was repeated.

The horse is now regularly employed at all kinds of farm work and inco-ordination is so slight as to be almost unnoticeable.

Discussion.—Intravenous injection of one to two pints of 5 per cent. solution of common salt and sodium citrate has, in the writer's experience, given encouraging results in various conditions thought to be associated with parasitism, and it is wondered if such treatment could effect any decalcification or absorption of any thrombus or exudate associated with strongylosis. Clinical findings and *post-mortem* examination following experimental treatment support the idea.

Inco-ordination in colts, as described in the adult in the foregoing case report, is frequently ascribed by an owner to injury when casting for castration. While this may be true in some cases, the writer is firmly of the opinion that, in the great majority, the larvae of *Strongylus vulgaris* are the cause.

Similar treatment given by the writer in an old-standing case of iliac thrombosis in a stallion caused no improvement in the symptoms associated with this condition.

HORSE SITUATION IN U.S.A. ARMY

Major R. T. Gilyard, Depot Veterinarian, Columbus (Ohio) Army Service Forces Depot, sends to the *Journal of the American Veterinary Medical Association* the following information on the present horse situation in the Army of the United States:—

"The closing of all but three of the seven remount depots of the Quartermaster Corps emphasises the wane of the cavalry horse in modern warfare. The depots were known as centres for fine animals and hundreds of stallions have been placed by them with private breeders for the improvement of stock. Those remaining in operation are at Pomona, Calif., Fort Robinson, Neb., and Reno, Nev. At other locations, sales of horses and equipment have been or will be held. Pack animals, however, will still be in use and much pack equipment is available for use. The Army dog training activities which were also located at remount depots have been centralised at Fort Robinson. The Front Royal, Va., depot will be abandoned by December 1st, with the exception of a skeleton force of personnel. Here facilities will be maintained for the care of several horses, including General John J. Pershing's mount, Jeff.'

"In both Tunisia and Italy, mounted cavalry would undoubtedly have been a useful adjunct to military operations, particularly in speed-up advances over difficult terrain by rapid reconnaissance. While the Russians have used, and are still using, cavalry effectively in close co-operation with tank action, following the armoured advance and mopping up scattered enemy units which the rapid mechanised advance passed by, it is doubtful whether mounted troops could have materially assisted our own recent swift armoured advance across France. In this action, thrusts were so swift and the daily advance so great that only mechanised units were able successfully to co-operate."—*Army and Navy Journal*, October 21st, 1944.

"I am afraid," says the Major, "that this is an unfortunate turn of events for the post-war light horse industry in the United States."

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WEEKLY WISDOM

Fundamentally there can only be one answer to the evils of the present age: self-sacrifice.—ROBT. YOUNG—"A Young Man Looks at Europe."

ABSTRACTS

[Changes in the Physiology and Pharmacology of the Uterine Muscle of the Cow in relation to the Oestrous Cycle. Cupps, P. T., and Asdell, S. A. (1944.) *J. Anim. Sci.* **3**. 351-359.]

Since hormone therapy in the treatment of bovine sterility has yielded rather disappointing results, the authors have commenced a study of the periodic changes in the histology and physiology of the bovine reproductive tract and the extent of hormonal influence on these changes. The present article deals with the normal activity of freshly excised uterine muscle at different stages of the oestrous cycle, the relation of this activity to the size of the muscle cell, and the response of the muscle to various drugs.

Myographic studies were made on uterine strips from ten heifers and one cow. Spontaneous motility was greatest during pro-oestrus and oestrus,* becoming irregular during metoestrus and dying down during dioestrus. Two types of contraction waves were recognised; the character of these waves varied with the stage of the cycle.

Pituitrin, arecolin, and lentin (carbamylcholine chloride) produced tonic contractions at all stages of the cycle. Eserine, pilocarpine and ergotamine tartrate had negligible or erratic effects. Atropine rarely proved inhibitory. Adrenaline was inhibitory when the uterus was in the oestrogenic phase and stimulatory in the progestational phase. From the varied effects obtained with the parasympathomimetic drugs it is concluded that the parasympathetic nervous system has little influence on the uterine musculature of the cow.

The uterine muscle cells tended to increase in length during the oestrogenic phase; this growth impulse appeared to commence at the tubal end and travel caudally.

*(The spelling "*oestrum*" occasionally used in this country is technically and etymologically less correct.—A. T. C.)

A. T. C.

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[Calcium Borogluconate-Saccharate: Preparation, Toxicity and Effect on Serum Calcium Level in Cows. Appleby, A. (1944.) *Amer. J. vet. Res.* **5**. 312.]

The purpose of the experimental work described in this article was to obtain a more soluble salt and one containing more calcium than calcium borogluconate for therapeutical use in cases of milk fever.

The formula used was:—

Calcium d-gluconate	100·0 g.
Boric acid	10·0 g.
Calcium d-saccharate	37·5 g.
Distilled water	500·0 c.c.

To the boiling solution of gluconate (boric acid and water) the saccharate was added and the final solution filtered through cotton. The complex obtained was called calcium-borogluconate-saccharate. Its toxicity for cows is no greater than that of calcium borogluconate.

Experiments to show the variations in serum calcium level following intravenous injections of this new complex were carried out on normal cows and not on cows suffering from hypocalcaemia, so that the results cannot be assumed to be those one would get in milk fever. An interesting result obtained was a second peak in the serum calcium level about half an hour after injection. The physiology of this is obscure and the work would need further corroboration before acceptance. There was also a more gradual fall in serum calcium after the first peak than is usual in the case of calcium borogluconate. If this can be substantiated by other workers its therapeutic importance is obvious.

J. S.

* * * * *

[The Production of Parturient Haemoglobinaemia by Low Phosphorus Intake. Madsen, D. E., and Nielsen, N. S. (1944.) *J. Amer. vet. med. Ass.* **105**. 22.]

Parturient haemoglobinaemia of dairy cows has been associated, as by these authors, with rations low in phosphorus. A low blood plasma phosphorus is a feature of the blood picture of cases of the disease.

An experiment is described of an attempt to induce the condition by feeding a low phosphorus diet but only on one animal. After two years eight months—having passed through three pregnancies—the cow developed the symptoms of parturient haemoglobinuria. While symptoms of the disease were apparent the blood phosphate content was 1·43 mg. as compared with values as low as 0·22 mg. per 100 c.c., which is usual in natural cases of the disease. The ration consisted of dry sugar beet pulp and green alfalfa hay. [The phosphate content of this diet was not lower than that fed in many experiments on low phosphate diets both in this country and throughout the world and in which no appearance of a haemoglobinuria has been recorded in the experimental animals.]

J. S.

IN PARLIAMENT

Artificial Insemination Bill

In the House of Commons, on Thursday of last week, there was presented the Agriculture (Artificial Insemination) Bill "to enable the Minister of Agriculture and Fisheries and the Secretary of State to make contributions and establish centres for the purposes of research as to the practice of artificial insemination of livestock; to provide for the payment of grants out of moneys provided by Parliament in respect of initial losses incurred in the operation of certain centres for the artificial insemination of cattle; and for purposes connected therewith." The Bill was presented by Mr. R. S. Hudson, supported by Mr. T. Johnston, Mr. Peake, Mr. Allan, Chapman and Mr. Tom Williams; "to be read a Second time upon Tuesday next, and to be printed."

* * * * *

Questions

Veterinary Officers (Remuneration)

Mr. R. Morgan asked the Minister of Agriculture whether the question of increasing the pay of veterinary officers in his Department is being dealt with under the general arrangements under consideration for improving the pay and status of scientific officers in the Civil Service, or as a separate question; and by what date it is anticipated a decision will be reached.

Mr. Hudson: The question of the remuneration of the Ministry's Veterinary Officers will be considered in relation to the remuneration of other scientific officers in the Civil Service after the end of the war with Germany.

* * * * *

Animal Diseases

Colonel Carver asked the Minister of Agriculture if he can give any estimate of the losses suffered in Great Britain in 1944 through animal diseases; and by what date he anticipates a completely adequate veterinary service will be available to and properly utilised by farmers.

Mr. Hudson: It is difficult to form a close estimate of the total losses due to animal disease, but the Loveday Committee on Veterinary Education, reporting early in 1944, put them as high as £30,000,000 per annum. The second part of the Question is even harder to answer, but I am afraid there is very little prospect of civilian veterinary services being increased until after the war.

* * * * *

Livestock (Marketing)

Mr. Arthur Duckworth asked the Minister of Agriculture whether he is aware of the difficulties now facing the markets committees of local authorities in making plans for the future of cattle markets generally; and whether he is in a position to make any statement with regard to post-war policy for the marketing of livestock.

Mr. Hudson: I am aware that certain local authorities have the future of their cattle markets under consideration, but regret that I am not at present in a position to make any statement about post-war arrangements for the marketing of livestock.

Mr. Duckworth: Is my right hon. Friend fully aware of the urgency of this matter, and does he not consider a statement long overdue?

POWDER FOR SURGICAL GLOVES

According to recent issues of the *Journal of the American Medical Association*, industrial hygienists and others have been agitated regarding the subject of talc for use in surgeons' gloves—that talc so used may prove hazardous for the patient, and substitutes which may be safe. On the subject Daniel Thomas Quigley, M.D. Omaha, comments in the same publication, reflecting (says the *North American Veterinarian*) horse sense:—

"I have been much interested in the discussion going on for some time about a substitute for talcum powder in operating room gloves.

"Why do we need any substitute? If gloves are dry and hands are dry, as they should be, and the gloves are the right size, any foreign material unnecessarily introduced into the field is an added danger. I have been wearing rubber gloves in the operating room for over 40 years and have never used any kind of glove powder. In these days of constantly changing operating room nurses I have to be on the alert to escape the avalanche of talcum with which I am constantly threatened, but so far I have valiantly held my ground and have gone into the operating room with fingers that are cleaner and have a better tactile sense.

"This tendency to get rid of an evil thing by substituting another evil thing is a common fault in everyday thinking. There is no need to have a substitute for a nuisance."

NOTES AND NEWS

The Editor will be glad to receive items of professional interest for inclusion in these columns.

Diary of Events

Mar. 17th.—Meeting of the Society of Women Veterinary Surgeons, 69, Great Peter Street, Westminster, S.W.1, 2.15 p.m.
Mar. 23rd.—Meeting of the North of England Division, N.V.M.A., at Newcastle-upon-Tyne (King's College), 1 p.m. (luncheon).
April 1st.—R.C.V.S. Annual Fees due.
April 11th.—R.C.V.S. Committee Meetings.
April 12th.—R.C.V.S. Committee and Council Meetings.
May 8th.—R.C.V.S. Council Elections—last day for nominations.
May 22nd.—R.C.V.S. Council Election—Voting Papers issued.
May 29th.—R.C.V.S. Council Election—Voting Papers to be returned.
June 5th.—R.C.V.S. Annual General Meeting.
June 6th.—R.C.V.S. Committee and Council Meetings.

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P.D.S.A. Bill Proceedings

A *verbatim* report of the above proceedings before Select Committees of both Houses of Parliament is being issued as a supplement to this number of *The Veterinary Record*. It is regretted that because of the paper shortage it has been found necessary to restrict the number of copies printed to 1,000. One copy, therefore, will be issued to each member of the Association *on application* to the Editorial Representative, 36, Gordon Square, London, W.C.1, until the supply is exhausted. Should sufficient paper eventually become available a further printing will be made, if the demand is such as to justify this.

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PERSONAL

Births.—Hughes Ellis.—On March 5th, 1945, at the County Hospital, Bangor, to Phyllis (*née* Desborough Timms), wife of T. Hughes Ellis—a daughter, Ann Felicity.

Lewis.—On January 30th, 1945, at the Pembroke County Hospital, Haverfordwest, to Margaret (*née* Jones), wife of G. D. Lewis, M.R.C.V.S., Truro—a daughter, Elizabeth Wyn.

Sweeney.—On March 10th, 1945, at the County Maternity Home, Aberystwyth, to Nancy, wife of Chas. Sweeney, Aberystwyth, a brother for Pat, John Sylvester.

Thomas.—On March 5th, 1945, at the County Maternity Home, Aberystwyth, to Muriel, wife of R. J. Thomas, Aberystwyth, a daughter, Christine Mary.

Veterinarian D.F.C.—The award has been announced of the Distinguished Flying Cross to Flying Officer Richard Lestocq Wooldridge (129349), Royal Air Force Volunteer Reserve, No. 149 Squadron.

In its citation of this award to Flying Officer Wooldridge, who graduated at the London College in 1940, the Air Ministry state: "An exceptionally able navigator, this officer has taken part in attacks on most of the enemy's principal targets in Germany. On two successive occasions, when detailed for a bombing attack on Duisburg and Bochum, his aircraft was attacked by enemy fighters. On both occasions, Flying Officer Wooldridge displayed commendable coolness and determination, thereby contributing largely to the safe return of his aircraft. At all times his keenness and devotion to duty have been worthy of the highest praise."

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R.C.V.S. OBITUARY

Cannon, G. T., Major S.A.V.C., Jeffreys Bay, Cape Province, South Africa. Graduated London May 17th, 1889. Died October 8th, 1944; aged 77 years.

Major G. T. Cannon, M.R.C.V.S.

An Appreciation

Major G. T. Cannon passed away at Bethel, Transvaal, and his death removes yet another link with pioneers of veterinary practice in South Africa, and particularly the Rand.

Following graduation he took up practice at Bicester, Oxfordshire, and at a later date at Worthing. Cannon was always of an adventurous turn of mind and wanted to see fields new, so it was not surprising that he enlisted in the Army Veterinary Dept. at the outbreak of the Anglo-Boer War. He was sent to different countries in connection with the purchase and transportation of remounts. After the cessation of hostilities he was appointed Government Veterinary Officer at Standerton. He resigned his Government appointment in 1904 to take up practice in Johannesburg. He served in the 1914-18 War as A.D.V.S. in South-West Africa, and later with the Union Expeditionary Force in East Africa in a similar capacity; he held the rank of Major throughout, and was mentioned in dispatches.

Cannon was of a kind and genial disposition and he endeared himself to a host of friends. He was of a practical and inventive turn of mind, and the writer is aware of the fact that one of his inventions is operating on the gold mines to-day, *viz.*, the Cannon Automatic-Grip release appliance used in the coco-pan haulage system. His wife predeceased him in 1932. W. A. D.

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The Late Mr. D. L. Robarts, B.Sc., M.R.C.V.S.

The sudden death of Mr. D. L. Robarts, announced with deep regret in our last issue, has deprived the Veterinary Laboratory, Weybridge, of a valuable young worker and esteemed friend. Educated at Bishops Stortford College, the Royal (Dick) Veterinary College and Edinburgh University, he joined the laboratory staff in 1940.

During the last four years he had worked on the serology of streptococci with particular relation to bovine mastitis and made a large-scale survey of the bacteria associated with that disease in Great Britain, the results of which he was writing up at the time of his death.

Robarts would have gone far. He brought all his energies to everything he did and his activities were wide and varied. Always well abreast of scientific literature he had, whilst at the laboratory, added two more languages to his equipment. He was an active member of the Home Guard and still found time to take up beekeeping and, more recently, the piano. A little shy and reserved at first, Robarts was a cultured and delightful companion to all who got to know him.

We mourn him deeply and would extend our sincerest sympathies to his loved ones in their great bereavement.

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VICTORIA VETERINARY BENEVOLENT FUND

The Secretary gratefully acknowledges the receipt of donations of the following amounts:—

In Memory of Mr. Herbert King ... ... £16 .0 6
from—Mrs. L. G. James, Miss Uvarov, Mrs. Whitby, Messrs. T. M. Fairclough, Ltd., Mrs. W. S. King and family, Messrs. W. C. Palmer, G. H. Richardson, A. H. H. Clarke, Mrs. L. F. M. Brown, Professor J. McCunn.

In Memory of Mr. W. S. King £15 15 0
from—Mr. D. M. Abbott, Messrs. Gryspeerdt & Sons, Mrs. A. Ponsonby, Messrs. Watney, Coombe, Reid & Co., Messrs. E. Wells & Son, Ltd., Messrs. A. C. Partridge, J. L. O'Connell, Professor J. McCunn.

Also from the Brighton and Hove Stadium, Ltd. ... £10 10 0

* * * * *

SCARCITY OF SHOEING SMITHS

The Worshipful Company of Farriers, in common with all those who have to do with horses, has been anxiously considering what steps can be taken to meet the present shortage of competent shoeing smiths. It has been said, perhaps with too much despondency, that unless something is done quickly the farrier will die out before the horse. The Company has, therefore, decided to reconstitute the Committee which before the war dealt with the examination and registration of shoeing smiths, its terms of reference being to examine the present position and take such steps as are necessary to encourage the re-establishment of the former courses of training and to reinstitute the examinations for the Diploma of R.S.S. (Registered Shoeing Smith). Among bodies invited to be represented on the Registration Committee are the R.C.V.S., the National Horse Society, the Pony Club, the Rural Industrial Bureau, and other interested institutions. The Court of the Company has nominated its own representatives on the Committee and Dr. Bullock, Registrar of the R.C.V.S., who is a member of the Court, has accepted the office of Chairman.

While it is likely that any scheme for providing adequate instruction for shoeing smiths throughout the country will have to wait for the cessation of the present hostilities, the Company is anxious to plan ways and means of resuscitating the scheme of examinations for its diplomas with as little delay as possible. The collaboration of veterinary surgeons who are interested in shoeing will be of the utmost value and the Company hopes that as many as possible will be willing to offer facilities for instruction to young smiths, and to co-operate in the examination scheme. The Clerk of the Company, Mr. L. C. F. Robson, 80, Bishopsgate, London, E.C.2, will be glad to receive offers of collaboration from any veterinary surgeons who have the necessary facilities.

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ADDRESSES OF DISEASE-INFECTED PREMISES

Foot-and-Mouth Disease: Ely Market and College Allotments, Llandaff, Cardiff, Glam. (Mar. 3rd); Er-Wem Piggery, Leckwith, Cardiff, Glam. (Mar. 7th); No. 1 Smallholding, Pontypridd Road, Barry, Glam. (Mar. 8th); Upper House Farm, Llantwit-Major, Glam. (Mar. 9th).

Swine Fever: Sea View, Fishguard, Pembrokeshire; Rede Hall, Rede, Bury St. Edmunds, Suffolk West; Knowle Mental Hospital, Knowle, Nr. Fareham, Southants; 31, Green Lane, Selby, Yorks., W.R. (Mar. 7th); Beaconsfield House, Blackwell, Derbyshire; The Garage, Harome, Yorks., N.R.; The Piggeries, Station Yard, Nunburnholme, Yorks., E.R. (Mar. 8th); 21, Newark Place, Brighton, Sussex; Holme Road, Market Weighton, Yorks., E.R.; Willesley Lane, Portway, Alvechurch, Warwickshire; Castle Gardens, Banbury, Oxon. (Mar. 9th); Piggery rear of Bridgend Road, Maesteg, Glam.; Gas House Lane Allotments, Cromer, Norfolk (Mar. 10th).

Sheep Scab: Trawsnant, Yspitty, Bettws-y-coed, Denbigh (Mar. 5th); Knowle Farm, Littleborough, Lancs. (Mar. 6th); Penisarmynydd, Druid, Corwen, Merioneth; Maesyr Haf, Trefriw, Caernarvonshire; Tyddyn Wilym, Trefriw, Caernarvonshire; Pasture House Farm, Calderbrook, Littleborough, Lancashire (Mar. 8th); Penybont, Yspytty, Ifan, Bettws-y-coed, Caernarvonshire (Mar. 9th).

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SCHEME FOR THE CONTROL OF DISEASES OF DAIRY CATTLE

STATEMENT SHOWING THE NUMBER OF UNDERTAKINGS NOTIFIED TO THE MINISTRY OF AGRICULTURE DURING THE MONTH ENDED FEBRUARY 28TH, 1945

County	Undertakings Notified		Total Undertakings		
	During Month	Previously	Number	Number of Cattle	
				Cows	Heifers
ENGLAND					
Bedford	—	42	42	994	552
Berks	—	105	105	3,534	2,215
Bucks	1	99	100	3,295	1,880
Cambridge	—	13	13	331	203
Chester	—	410	410	13,381	4,593
Cornwall	—	4	4	72	75
Cumberland	—	65	65	1,618	1,411
Derby	5	345	350	9,946	5,675
Devon	9	292	301	4,488	2,708
Dorset	—	70	70	2,160	1,145
Durham	3	287	290	6,371	2,228
Essex	—	256	256	9,099	5,385
Gloucester	—	102	102	2,974	1,729
Hampshire	1	403	404	11,202	7,434
Hereford	—	23	23	299	237
Hertford	1	78	79	2,356	1,441
Hunts	—	13	13	475	302
Isle of Ely	—	3	3	83	75
Isle of Wight	—	14	14	252	127
Kent	3	162	165	4,232	2,508
Lancs	—	202	202	5,783	1,812
Leics	1	104	105	2,660	1,865
Lincs (Holland)	—	3	3	25	11
Lincs (Kesteven)	—	24	24	311	149
Lincs (Lindsey)	5	105	110	2,070	1,159
Middlesex	—	16	16	641	307
Norfolk	—	198	198	5,976	4,112
Northants	1	86	87	2,454	1,872
Northumberland	—	69	69	2,349	1,126
Notts	—	168	168	3,731	2,236
Oxford	2	44	46	1,287	1,144
Rutland	—	9	9	172	124
Salop	—	275	275	8,426	4,038
Soke of Peterborough	—	1	1	37	31
Somerset	1	252	253	6,655	3,138
Staffs	—	220	220	6,464	3,469
Suffolk, E.	—	93	93	2,192	1,628
Suffolk, W.	—	52	52	1,065	642
Surrey	—	113	113	3,219	1,467
Sussex, E.	2	177	179	4,621	2,632
Sussex, W.	3	119	122	3,372	2,032
Warwick	1	140	141	3,468	2,154
Westmorland	—	15	15	400	474
Wilts	—	97	97	3,928	1,847
Worcester	2	156	158	3,264	1,532
Yorks, E.R.	1	108	109	1,685	977
Yorks, N.R.	1	117	118	2,379	1,403
Yorks, W.R.	2	270	272	6,673	2,573
WALES					
Anglesey	—	48	48	836	611
Brecon	—	9	9	199	108
Caernarvon	—	114	114	1,780	974
Cardigan	3	33	36	678	480
Carmarthen	1	247	248	4,418	2,277
Denbigh	—	61	61	1,361	655
Flint	—	118	118	2,663	1,158
Glamorgan	1	107	108	1,795	712
Merioneth	—	10	10	125	68
Monmouth	—	55	55	1,308	755
Montgomery	—	15	15	296	222
Pembroke	—	85	85	1,647	1,195
Radnor	—	—	—	—	—
TOTALS	50	6,921	6,971	179,515	97,182

Notes.—(1) Operative periods of undertakings: 1 year, 1,362; 2 years, 608; 3 years, 5,061. (2) Undertakings renewed for a further period: 1 year, 844; 2 years, 156; 3 years, 141. (3) Undertakings not renewed at end of operative period, 521. (4) The figures showing the number of undertakings notified during the month relate to entirely fresh undertakings and do not include undertakings renewed for a further period. Undertakings which have been cancelled or not renewed are not included in the figures for previous notifications.

County	Undertakings Notified		Total Undertakings		
	During Month	Previously	Number	Number of Cattle	
				Cows	Heifers
SCOTLAND					
Aberdeen	—	18	18	752	219
Angus	—	21	21	838	395
Argyll	—	6	6	113	115
Ayr	—	34	34	1,088	841
Banff	—	3	3	93	42
Berwick	—	2	2	53	22
Bute	—	—	—	—	—
Caithness	—	—	—	—	—
Clackmannan	—	7	7	282	257
Dumfries	—	13	13	707	610
Dumbarton	—	3	3	105	86
East Lothian	—	3	3	145	88
Fife	—	36	36	1,322	629
Inverness	—	8	8	324	191
Kincardine	—	4	4	195	126
Kinross	—	3	3	56	40
Kirkcudbright	—	16	16	954	700
Lanark	—	21	21	777	587
Midlothian	—	1	1	44	69
Moray	—	—	—	—	—
Nairn	—	1	1	14	—
Orkney	—	—	—	—	—
Peebles	—	2	2	28	16
Perth	—	31	31	709	425
Renfrew	—	7	7	277	201
Ross-shire	—	2	2	58	52
Roxburgh	—	—	—	—	—
Selkirk	—	—	—	—	—
Stirling	—	28	28	928	779
Sutherland	—	5	5	105	72
West Lothian	—	1	1	23	18
Wigtown	1	27	28	1,868	1,064
Zetland	—	—	—	—	—
TOTALS	1	303	304	11,858	7,644

Notes.—(1) Duration of undertakings: 1 year, 41; 2 years, 18; 3 years, 245. (2) Undertakings renewed for a further period (included in column 2 of statement): 1 year, 35; 2 years, 6; 3 years, 6. (3) Undertakings expired and not renewed (not included in column 2 of statement): 85. (4) The figures showing the number of undertakings notified during the month relate to entirely fresh undertakings.

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ROYAL VETERINARY COLLEGE AND HOSPITAL

The annual meeting of the Court of Governors of the Royal Veterinary College was held, by courtesy of the Royal Agricultural Society of England, at 16, Bedford Square on February 27th and the subjoined annual report for the academic year ended September 30th, 1944, was adopted.

The following were invited to accept reappointment to their offices until 1948:—

President—H.R.H. the Duke of Gloucester, K.G.

Vice-Presidents—The Rt. Hon. the Lord Mildmay of Flete, P.C.
The Rt. Hon. the Earl of Harewood, K.G.
Lt.-Col. Sir Merrik Burrell, BT., C.B.E.

In addition to the matters dealt with in the report the Chairman, Lt.-Col. Sir Merrik Burrell, BT., C.B.E., mentioned that it was hoped that the College premises at Camden Town would be released from requisition in time for the second and first year courses to be re-established there at the beginning of the next session.

ANNUAL REPORT

The Council has much regret in reporting the death of Mr. G. H. Livesey, M.R.C.V.S., a member of the Council.

Teaching

During the session 71 new students were admitted as compared with 77 in the session 1942-43. The total number of students at the beginning of the session was 296, the number for the previous year being 292.

At the examinations held by the Royal College of Veterinary Surgeons in December, 1943, 115 students presented themselves for examination and 79, or 68 per cent., passed, and at the examinations held in July, 1944, 228 students presented themselves and 181, or 79 per cent., passed. The percentage of passes in December, 1942, and July, 1943, were 77 per cent. and 70 per cent. respectively.

During the year under report 53 students obtained the Diploma of Membership of the Royal College of Veterinary Surgeons, as compared with 59 who qualified in the previous year.

The number of students preparing for the B.Sc. (Veterinary Science) degree shows a steady increase. Seventy-six were enrolled in all years compared with 68 last year, 58 in 1941 and 43 in 1940.

In spite of war-time difficulties the College has done much more than merely carry on. In anticipation of a greatly extended need for the adoption of precautionary measures against diseases of farm animals during the post-war period, the College has taken vigorous steps to widen the teaching of its students along these lines. A rural environment with ready access to an abundance of clinical material has proved invaluable for this purpose.

[The Report shows a considerable programme of research in progress both in the College and in the Research Institute of Animal Pathology, and proceeds as follows.]

The Hospital

At the Beaumont Animals' Hospital attendances at the clinic numbered 12,458 compared with 12,893 during the preceding year.

Staff

Appointments

H. Burrow, M.R.C.V.S., D.V.S.M., F.R.SAN.I., Professor of Medicine.
O. G. Edholm, B.SC., M.R.C.S., L.R.C.P., M.B., B.S., Professor of Physiology.
C. Formston, M.R.C.V.S., Professor of Surgery.
J. Bolton, M.R.C.V.S., Lecturer in Surgery.
E. H. Batten, B.SC., Demonstrator, Biology.
Miss C. L. Clark, M.R.C.V.S., Demonstrator, Bacteriology.
Miss G. Halley, B.SC., Demonstrator, Chemistry.
Mrs. J. L. Linzell, M.R.C.V.S., House Surgeon.
Mrs. J. G. Wright, M.R.C.V.S., House Surgeon.

Resignations

J. Bolton, M.R.C.V.S., Lecturer in Surgery.
J. J. Bullen, M.R.C.V.S., Demonstrator, Bacteriology.
J. L. Linzell, M.R.C.V.S., House Surgeon.
C. M. Newsholme, M.R.C.V.S., House Surgeon.
Mrs. J. L. Linzell, M.R.C.V.S., House Surgeon.

Finance

This section of the report showed that expenditure exceeded income, excluding Government grant, by £22,407 as compared with £18,689 in the preceding year, and that revenue, excluding Government grant, showed little change. Subscriptions were received from 340 regular subscribers during the year. £877 was spent on microscopes purchased by the College because students were unable to obtain them and £302 on the purchase of a Ford utility van for the conveyance of students to see clinical material. The net cost of the Beaumont Animals' Hospital at Camden Town was £1,457 compared with £1,156 in the previous year.

There was a noticeable increase in the income of the Wallingford Practice, from £1,166 in 1942-43 to £1,991 in 1943-44.

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IRELAND'S VETERINARY NEEDS

"In reply to a question in the Dail last week," says *The Irish Times* of February 28th, "Dr. Ryan, Minister for Agriculture, said that there were 395 registered veterinary surgeons in Ireland, and about 8,500,000 of the larger domesticated animals. He could not undertake to give comparable figures for Great Britain and Denmark. While we cannot compensate exactly for the gaps in the Minister's information, we may refer him to a recent address by Mr. John A. Flynn, Chief Veterinary Officer of the Dublin County Council. According to Mr. Flynn, there is in Ireland one veterinary surgeon for every 13,000 horses and cattle; in Great Britain, Holland and Northern Ireland there is one veterinary surgeon for every 4,000 of these animals, and in Denmark one for every 3,500. Great Britain has about 2,300 veterinary surgeons in all, and the Loveday Committee has recommended an increase of no less than 2,000. These facts assume their proper significance when one realises that the annual loss to the livestock industry by reason of preventable disease may be as much as £7,000,000. What proportion of that bill could be wiped out by adequate veterinary services it is impossible to estimate, but it must be high. In the first place, farmers employ the 'vet.' at present only when a beast is critically ill; constant supervision might serve to prevent much disease. Again, the investment of a reasonable sum in veterinary research might help to solve the problems of many diseases —mastitis and contagious abortion, for instance—which are responsible for heavy losses yearly. In any case, the country's annual expenditure on veterinary services is only about a quarter of a million pounds—about 0·38 *per cent.* of the annual value of livestock and livestock products. Even if the services were doubled the expenditure still would be small in relation to the benefits. The first essential, it seems, is an extension of facilities for the training of students. The college at Ballsbridge has so long a waiting list that a prospective student has to wait between one and two years before he can be admitted. In addition, the course costs about £200 in fees, apart from the student's living expenses for five years, and it appears that no form of assistance is available for poorer boys who may wish to enter the profession. Here, then, are two practical suggestions—an increase in the available accommodation for training, and the provision of State scholarships as an inducement to needy youths. By these means we might manage to produce the veterinary surgeons. Our only problem then is how to keep them."

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A POTENT NEW INSECTICIDE

Dr. Roland Slade, of Imperial Chemical Industries, in a lecture to the Liverpool Branch of the Society of Chemical Industry, announced the development of a remarkable new British insecticide, gammexane, explaining that it is the gamma isomer of benzene hexachloride, the chemical formula of which is $C_6H_6Cl_6$, or 666 for short. Early in 1943 the gamma isomer of "666 was isolated and found to be more toxic to weevils than any substance they had ever tested in the entomological laboratory of I.C.I. It was thus established that the insecticidal action of 666 (which was first made by Michael Faraday early last century) was due almost entirely to the presence of gammexane, and a method of preparing pure gammexane had been worked out.

Gammexane had been shown to be highly toxic to many insects and certain other pests. To some pests it had proved more toxic in laboratory tests than any other insecticide examined, Dr. Slade said. There was every indication that in gammexane a new and highly effective material had been found to fight that age-old pest, the locust. I.C.I. maintained at their biological laboratory at Hawthorndale the only colony of locusts in this country, and tests there soon showed that the new material was much more toxic in locust baits than anything hitherto used.

Dr. Slade described numerous other agricultural, medical and veterinary, and general applications of the new substance. To name only a few, a preliminary experiment in the field against wireworm led them to hope that at last they might have found a means of fighting that pest, which caused the failure of so many farmers' crops in Britain. Gammexane had proved highly toxic to lice and fleas. Lice on pigs, red mite on poultry and fleas on dogs had all been successfully controlled. It could also be said that gammexane, on the evidence of extensive tests carried out in 1944, was likely to be of greater allround effectiveness against many pests of sheep and cattle than the substances hitherto employed. The product was found to be toxic to keds and sheep ticks. Less extensive work gave great promise against sheep blow fly, scab and biting lice. It had given higher kills of the larvae of the yellow fever mosquito than any other material examined.

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DDT

In an address before the recent annual meeting of the National Pest Control Association, in Chicago, Dr. W. E. Dove, who has been directing investigations in the use of DDT is quoted[1] as having stated that DDT (Dichlorodiphenyltrichloro-Ethane) has been referred to as an "insecticide which is both praised to the limit and accused as being worthless." But he recommended "a middle road attitude" and suggested that good judgment be employed.

Dr. Dove anticipates the use of this insecticide when it becomes generally available for use in sprays, dips, dusts and aerosols. Indications for uses of this new product when available would, according to Dr. Dove, be for killing bed bugs and other pests, for killing roaches, for spraying livestock and for use against flies and insects in stables.

With reference to the undesirable effects in connection with DDT, reference is made to its toxic properties when used in oily vehicles, but Dr. Dove stated that several hundred goats were dipped in an emulsion containing DDT but that this "yielded no evidence that vision had been interfered with."—*N. Amer. Vet.*

[1] Dove, W. E.: Soap and Sanitary Chemicals. **20** (1944). 107-108.

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For the first time, an announcement was made in all the churches and chapels of the district that foot-and-mouth disease had broken out at Llanfaes, Brecon, and a list of all parishes was given which come within the restricted area.

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Fines totalling £875 were recently imposed by St. Ives magistrates on four men who appeared in connection with the illegal slaughter and disposal of animals. One man alone, who had three pigs killed with the intention of augmenting the rations of his customers, was fined £400 for doing so, while another was fined £250 for failing to give notice of the slaughter of a cow.

DISEASES OF ANIMALS ACTS, 1894 TO 1937, AND AGRICULTURE ACT, 1937 (PART IV).

Summary of Returns of Confirmed Outbreaks of Scheduled (Notifiable) Diseases

Period	Anthrax	Foot-and-mouth	Parasitic Mange*	Sheep Scab	Swine Fever†
Feb. 1st to 15th, 1945...	5	2	—	3	58
Corresponding period in—					
1944 ...	15	—	—	6	31
1943 ...	18	—	2	23	22
1942 ...	16	3	5	15	19
Total Jan. 1st to Feb. 15, 1945	18	25	1	11	145
Corresponding period in—					
1944 ...	39	3	3	40	79
1943 ...	46	8	2	51	63
1942 ...	46	3	8	62	61

NOTE.—The figures for the current year are approximate only.
* Excluding outbreaks in Army Horses.